REMARKS

The Present Invention

The elected invention is directed to a series of related compounds characterized by specific substitutions within the chemical structure [IV]. These compounds possess cooling properties and can be used as a replacement for menthol in non-pharmaceutical applications. Certain selection criteria among the substituent groups have been identified that are surprising in view of the prior art (see below).

Claim Rejections - 35 USC § 102

In the office action mailed May 5, 2005 Claims 13-21 were rejected under 35 U.S.C. §102(b) as being anticipated by Podesva et al (US patent 3, 821,221). Citing Formula III of Podesva, (column 3), the Examiner alleged that the compounds of the instant invention were taught. Applicants respectfully disagree.

Podesva is directed to compounds that have potential activity as psychotropic drugs. The compounds disclosed by Podesva under Formula III are compared in the table below with the relevant embodiments claimed by applicants.

It is seen from this table that Podesva's and applicants' compounds are not only different, but moreover the substituent combinations taught by Podesva are expressly excluded in applicants' claims. Thus, Podesva does not anticipate applicant's invention because the identical compounds are not disclosed.

| , | Podesva U.S. 3, 821,221 | Applicants' |
|---------------|----------------------------|---------------------------------------|
| Structure | NHO NH | X X X X X X X X X X X X X X X X X X X |
| n value | 1 | 1 |
| Y substituent | -OH (formula 1) | -OH (one embodiment) |
| | -NO ₂ ; | NOT -NO ₂ (claim 13) |
| X substituent | Halogen; | NOT Halogen (Claim 14) |
| | or trifluoroalkyl | NOT haloalkyl (Claim 13 Markush |
| | (see column 3 line 20 –21) | group) |

In the office action, Claims 13-21 were rejected under 35 U.S.C. §102(b) as being anticipated by Mita et al (JP 08027120 – full translation enclosed). Citing Formula I of Mita (page 2), the Examiner alleged that the compounds of the instant invention were taught. Applicants respectfully disagree.

Mita is directed to compounds that have insecticidal and miticidal activity. The compounds disclosed by Mita under Formula I are compared in the table below with those claimed by applicants.

It is seen from the table that Mita requires that at carbon No. 2 in the aromatic "Ring A", the hydrogen atom be <u>substituted</u> (X^1) with either halogen; C_{1-4} alkyl; C_{1-4} alkoxy; C_{1-4} alkylthiol; C_{1-4} haloalkyl; C_{1-4} haloalkoxy; C_{1-4} haloalkylthio; amino; cyano; or nitro. In contrast, applicants' compounds are <u>unsubstituted</u> at this carbon atom (i.e., X^1 = hydrogen). Thus, the Mita et al and applicants' compounds are different and consequently Mita does not anticipate applicants' claims.

| | Mita et al JP 08027120 | Applicants' |
|--------------------------|---|--------------------|
| Structure | RING A RING B RING C | |
| Substituent at | X ¹ = | RINGA RINGB RIAGO |
| No. 2 carbon of "Ring A" | Halogen; C ₁₋₄ alkyl; C ₁₋₄ alkoxy; C ₁₋₄ alkylthiol; C ₁₋₄ haloalkyl; C ₁₋₄ haloalkylthio; amino; cyano; or nitro | See structure [IV] |
| · | See translation page 6 - paragraph 3 | |

In the office action, Claims 13-21 were rejected under 35 U.S.C. §102(b) as being anticipated by Wei et al (Journal of Pharmacy and Pharmacology, 35, 110-112 (1983)). Citing the structure of AG-3-5 in Fig 1, the Examiner alleged that the exact compounds were taught. Applicants respectfully disagree.

The structure of AG-3-5 is compared in the table below with the relevant embodiments of applicants' compounds. It is seen that AG-3-5 contains both an –OH group on "Ring C" and a Nitro (-NO₂) group in ring A. In contrast, applicants explicitly state in independent claim 13 that when n is 1, Y is hydroxy and X is <u>not</u> nitro. Thus AG-3-5 and applicants' compounds are different and consequently Wei et al does not anticipate applicants claimed invention.

| | Wei et al | Applicants' |
|---------------|------------------|---------------------------------|
| | AG-3-5 Fig 1 | |
| Structure | | NO ₂ |
| | Ringa 1 | Ring C Ring A Ring C |
| n value | 1 | 1 |
| Y substituent | -OH (formula 1) | OH (embodiment) |
| | -NO ₂ | NOT -NO ₂ (claim 13) |
| X substituent | | |

For a claim to be anticipated by a prior art reference, every element of the claim must be present in the reference. Since Podesva, Mita, and Wei disclose chemical compounds that are different from applicants', the references do not meet this standard. Consequently, applicants' respectfully request that the §102 (b) rejection over Podesva et al (US patent 3, 821,221), Mita et al (JP 08027120), and Wei et al (Journal of Pharmacy and Pharmacology, <u>35</u>, 110-112 (1983)) be reconsidered and withdrawn.

Claim Rejections - 35 USC § 103

In the office action mailed May 5, 2005 claims 13-21 were rejected under 35 U.S.C. §103(a) as being unpatentable over Podesva et al (US patent 3, 821,221), Mita et al (JP 08027120) and Wei et al (Journal of Pharmacy and Pharmacology, 35, 110-112 (1983)). The Examiner asserts that it would have been obvious to one having ordinary skill in the art to select any of the species of the genus taught by these references including those instantly claimed. The Examiner further asserts that the skilled chemist would have had the reasonable expectation that any of the species of the genus would have had similar properties as taught for the genus as a whole. Applicants respectfully traverse this rejection for the following reasons.

Firstly, as seen in the above tables and previously discussed, the compounds claimed in applicants' invention actually <u>do not belong to the same genus</u> disclosed by the references cited by the Examiner. Because of the substituents explicitly excluded by applicants, there is no overlap between applicants' compounds and the set of compounds disclosed in the three references.

Secondly, the three references collectively in fact teach away from applicants' claimed invention. A chemist of ordinary skill in the art reading any of these references and knowing the general specificity of drug activity on chemical structure, would not be motivated to investigate compounds that would not have contained the key chemical

T3090(C)

substituents disclosed in these references. The skilled chemist would have probably concluded that these modifications would have lead to a loss in the intended drug activity, (e.g., psychotropic activity), i.e., that the modification would have made the invention inoperative. Without the benefits of hindsight, the skilled chemist would neither have been motivated to go in a direction that would have lead to applicants' compounds nor would have had any reasonable expectation that such modifications would have been useful in the context of the references being considered.

Based on the above arguments, applicants respectfully request that the §103(a) rejections of claims 13-21 over Podesva, Mita and Wei, individually or collectively, be reconsidered and withdrawn and that the application be allowed to issue.

If a telephone conversation would be of assistance in advancing prosecution of the subject application, applicants' undersigned agent invites the Examiner to telephone him at the number provided.

Respectfully submitted,

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